

AMENDMENTS TO THE CLAIMS

Please amend claims 1-5, 8 and 10-13, add new claims 16-20, and cancel claims 6, 7, 9, and 15 as set forth below.

Listing of Claims

1. (Currently Amended) An occlusion device comprising:

a braiding of thin wires or threads given a suitable form by a molding and heat treatment procedure, having a proximal retention area with a first diameter and a distal retention area with a second diameter;

a holder disposed in the distal retention area, wherein the ends of the wires or threads converge therein;

a cylindrical crosspiece interposed between said proximal and distal retention areas, the cylindrical crosspiece having a third diameter smaller than the first diameter and second diameter; ~~whereby the two retention areas are positioned on the two sides of a shunt to be occluded in a septum by an intravascular surgical procedure while the crosspiece transverses the shunt~~;

wherein the proximal retention area of the braiding exhibits a flaring toward a proximal end, and

wherein an edge of the proximal end lies flush with the septum.

2. (Currently Amended) ~~An~~ The occlusion device in accordance with claim 1, wherein the braiding is composed of nitinol or of another shape-memory material.

3. (Currently Amended) ~~An~~ The occlusion device in accordance with claim 2, wherein the braiding is formed from a shape-memory polymer, ~~preferably based on a polyanhydride matrix or on polyhydroxycarboxylic acids.~~

4. (Currently Amended) ~~An~~ The occlusion device in accordance with claim 2 ~~3~~, wherein the braiding is formed from a shape-memory polymer of a block copolymer form.

5. (Currently Amended) ~~An~~ The occlusion device in accordance with claim 1, wherein the braiding tapers to a diameter which is suitable for delivery by one of a plurality of catheters used in the intravascular surgical procedure.

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) ~~An~~ The occlusion device in accordance with claim 1, wherein the wires or threads of the braiding at the open end of the proximal retention area are looped back to a closed end of the distal retention area and secured at the distal retention area in the holder disposed in the distal retention area.

9. (Cancelled)

10. (Currently Amended) A method of manufacturing an occlusion device comprising:

configuring a funnel-shaped hollow braiding by bundling said hollow braiding at a first distal end;

allowing an opposite ~~second~~ proximal end to remain open;

forming a proximal retention area having a first diameter at the ~~open second proximal~~ end[,] and a distal retention area having a second diameter at the ~~bundled first distal~~ end[,] and

interposing a cylindrical crosspiece having a third diameter smaller than the first diameter and second diameter between said proximal and said distal retention areas[,]

wherein said proximal retention area of said braiding is flared towards the proximal end.

11. (Currently Amended) The method in accordance with claim 10, further comprising configuring a holder at the ~~bundled~~ distal first end of said funnel-shaped hollow braiding.

12. (Currently Amended) The method in accordance with claim 10, wherein the step of forming a proximal retention area comprises shaping the proximal end of the braiding in the form of a tulip, bell, or saucer when viewed in cross-section ~~wires and threads of the braiding at an outer edge of the flattened tulip shape of the open end of the proximal retention area are looped back to a closed end of the distal retention area and are bundled and secured there in the holder.~~

13. (Currently Amended) The method in accordance with claim 10, wherein the step steps configuring a funnel-shaped hollow braiding comprises braiding a shape-memory polymer ~~of forming retention areas and crosspiece includes a molding and/or heat treatment.~~

14. (Previously Presented) The method in accordance with claim 10, wherein a funnel-shaped hollow braiding structure is produced such that the thin wires or threads that comprise finished braiding are intertwined at the proximal open end of the braiding when the funnel-shaped hollow braiding is formed.

15. (Cancelled)

16. (New) The method in accordance with claim 10, further comprising the step of securing a fabric insert into the cylindrical crosspiece and/or the retention areas.

17. (New) The occlusion device in accordance with claim 3, wherein the a shape-memory polymer is based on a polyanhydride matrix or on polyhydroxycarboxylic acids.
18. (New) The occlusion device in accordance with claim 1, wherein a proximal retention area of the braiding exhibits a flattened tulip-shaped, bell-shape, or saucer-shape when viewed in cross-section.
19. (New) The occlusion device in accordance with claim 1, wherein at least one fabric insert is secured to the cylindrical crosspiece or the proximal retention area.
20. (New) The occlusion device in accordance with claim 13, wherein the step of braiding a shape-memory polymer comprises braiding a polymer based on a polyanhydride matrix or on polyhydroxycarboxylic acids.